IN THE CLAIMS

1. (Original) An optical line interface assembly for insertion in a slot of a communications rack, the assembly comprising:

a board having a plurality of connectors each formed to couple to an optical interface module, the board further having a network interface and a conversion module linking the connectors and the network interface, the conversion module operable to convert signals between an optical protocol and an electrical protocol; and

a plurality of optical interface modules, each optical interface module having at least one optical line interface operable to couple to an optical signal line, the optical interface modules removably coupled to the connectors to permit replacement of a selected one of the optical interface modules while another of the optical interface modules remains coupled to an associated optical signal line and while the network interface remains coupled to a backplane of a communications rack.

2. (Original) The assembly of Claim 1, wherein the board comprises a plurality of guides each operable to receive an inserted one of the optical interface modules and to align the inserted one of the optical interface modules with a corresponding one of the connectors.

3. (Original) The assembly of Claim 2, wherein each of the guides comprises guide slots, and wherein each of the optical interface modules comprises grooves corresponding to the guide slots.

4. (Original) The assembly of Claim 1, wherein the connectors are nine-pin D-subminiature connectors, and the optical interface modules comprise mating nine-pin D-subminiature connectors.

5. (Original) The assembly of Claim 1, wherein the connectors are PCMCIA connectors, and the optical interface modules comprise mating PCMCIA connectors.

6. (Original) The assembly of Claim 1, wherein the optical interface modules convert between optical serial bit streams and electrical serial bit streams.

7. (Original) The assembly of Claim 1, wherein a failure rate of the optical interface modules is at least ten times greater than a failure rate of the conversion module.

8. (Original) The assembly of Claim 1, wherein each of the optical interface modules comprises two optical line interfaces to provide full duplex communications.

9. (Currently Amended) An optical interface module comprising:

at least one optical line interface for coupling to an optical line;

a connector for removably coupling the optical interface module to an optical interface card; and

an electrical/optical converter operable to convert between optical signals communicated by the optical line interface and electrical signals communicated by the ~~connector;~~ connector.

~~wherein the optical line interface receives optical signals that comprise a serial bit stream and a bit clock; and~~

~~wherein the electrical/optical converter converts the serial bit stream and the bit clock into electrical signals and communicates the electrical signals via the connector to a framing device on the interface card for conversion into asynchronous transfer mode (ATM) cells.~~

10. (Original) The optical interface module of Claim 9, wherein the connector is a nine-pin D-subminiature connector corresponding to a mating nine-pin D-subminiature connector on the interface card.

11. (Original) The optical interface module of Claim 9, wherein the connector is a PCMCIA connector corresponding to a mating PCMCIA connector on the interface card.

12. (Canceled)

13. (Original) The optical interface module of Claim 9, further comprising grooves corresponding to guides of the interface card, wherein the grooves facilitate alignment of the connector with a mating connector on the interface card.

14. (Original) The optical interface module of Claim 9, wherein the connector facilitates removal of the optical interface module from the interface card while the interface card remains coupled to a backplane of a communications equipment rack.

15. (Previously Presented) A method for replacing an optical interface module of an optical line interface assembly comprising:

coupling a plurality of optical interface modules to connectors on a board using mating connectors on the optical interface modules;

coupling the board to a backplane of a communications equipment rack using a network interface, the board having a conversion module linking the connectors and the network interface, the conversion module operable to convert signals between an optical protocol and an electrical protocol;

coupling at least one optical line to each of the optical interface modules;

determining that a selected one of the optical interface modules has failed; and

removing the selected optical interface module while the board remains coupled to the backplane.

16. (Original) The method of Claim 15, wherein the board comprises a plurality of guides each operable to receive an inserted one of the optical interface modules and to align the inserted one of the optical interface modules with a corresponding one of the connectors.

17. (Original) The method of Claim 16, wherein each of the guides comprises guide slots, and wherein each of the optical interface modules comprises grooves corresponding to the guide slots.

18. (Original) The method of Claim 15, wherein the connectors are nine-pin D-subminiature connectors.

19. (Original) The method of Claim 15, wherein the connectors are PCMCIA connectors.

20. (Original) The method of Claim 15, wherein the optical interface modules convert between optical serial bit streams and electrical serial bit streams.

21. (Original) The method of Claim 15, wherein a failure rate of the optical interface modules is at least ten times greater than a failure rate of the conversion module.

22. (Original) The method of Claim 15, wherein each of the optical interface modules comprises two optical line interfaces to provide full duplex communications.

23. (New) The optical interface module of Claim 9, wherein:

the optical line interface receives optical signals that comprise a serial bit stream and a bit-clock; and

the electrical/optical converter converts the serial bit stream and the bit-clock into electrical signals and communicates the electrical signals via the connector to a framing device on the interface card for conversion into asynchronous transfer mode (ATM) cells.

24. (New) An optical line interface assembly for insertion in a slot of a communications rack, the assembly comprising:

a board having a plurality of PCMCIA connectors each formed to couple to an optical interface module, the board further having a plurality of guides each operable to receive an inserted one of the optical interface modules and to align the inserted one of the optical interface modules with a corresponding one of the PCMCIA connectors, the board further having a network interface and a conversion module linking the PCMCIA connectors and the network interface, the conversion module operable to convert between asynchronous transfer mode (ATM) cells and electrical serial bit streams; and

a plurality of optical interface modules each operable to convert between electrical serial bit streams and optical serial bit streams, each optical interface module having at least one optical line interface operable to couple to an optical signal line, the optical interface modules removably coupled to the PCMCIA connectors to permit replacement of a selected one of the optical interface modules while another of the optical interface modules remains coupled to an associated optical signal line and while the network interface remains coupled to a backplane of a communications rack;

wherein a failure rate of the optical interface modules is at least ten times greater than a failure rate of the conversion module.